# APPENDIX A. CROSSWALK BETWEEN 1993 GEORGE WASHINGTON AND 2004 JEFFERSON PLAN MANAGEMENT DIRECTION

Crosswalk			

### **Management Prescription Areas CROSSWALK**

19	993 GW Management Area	Revised GW Management Prescription Area (consistent with Jefferson NF 2004 Plan)		
Code	Description	Code	Description	
4	Special Interest Area - Biologic	4D	Botanical-Zoological Area	
4	Special Interest Area - Historic	4E	Cultural - Heritage Area	
4	Special Interest Area - Geologic	4C1	Geologic Area	
4	Existing Research Natural Area	4B	Research Natural Area	
4	Shenandoah Mount Crest - Cow Knob Salamander Conservation Area	8E7	Shenandoah Mount Crest - Cow Knob Salamander Conservation Area	
6	Appalachian Trail	4A	Appalachian National Scenic Trail Corridor	
5, 7	Scenic Corridors	7B	Scenic Corridors and Viewsheds	
7	Highland Scenic Tour	7A1	Scenic Byway Area	
7	Blue Ridge Parkway	7F	Blue Ridge Parkway	
8	Designated Wilderness	1A	Designated Wilderness	
8	Recommended Wilderness Study Area	1B	Recommended Wilderness Study Area	
9	Remote Highlands	12D	Remote Backcountry - Nonmotorized Area	
10	Eligible Scenic River	2C2	Eligible Scenic River	
10	Eligible Recreational River	2C3	Eligible Recreational River Corridors	
11	ATV Use Area	7C	ATV Use Areas	

1993 GW Management Area		Revised GW Management Prescription Area (consistent with Jefferson NF 2004 Plan)		
Code	Description	Code	Description	
12	Developed Recreation Area	7D	Concentrated Recreation Areas	
13	Dispersed Recreation Areas	7E1	Dispersed Recreation Areas - Unsuitable	
13	Dispersed Recreation Areas (North River, Hidden Valley, Shaws Fork)	7E2	Dispersed Recreation Areas - Suitable	
14	Remote Habitat for Wildlife	13	Mosaics of Habitat	
15	Mosaics of Wildlife Habitat	13	Mosaics of Habitat	
16	Early Successional Forested Habitats for Wildlife	13	Mosaics of Habitat	
17	Timber Production - Suitable Timberland	13	Mosaics of Habitat	
18	Riparian Area	11	Riparian Area/Corridors	
20	Administrative Sites	5A	Administrative Sites	
20	Utility Corridors	5C	Utility Corridors	
20	Communication Sites	5B	Communication Sites	
21	Big Schloss Special Management Area	12D	Remote Backcountry - Nonmotorized Area	
21	Laurel Fork Special Management Area	12D (50%), 4D (50%)	Remote Backcountry - Nonmotorized Area and Special Biological Areas	
21	Mt. Pleasant Special Management Area	4F	Mt. Pleasant Nat'l Scenic Area	
21	Little River Special Management Area	1B and 8E7	Recommended Wilderness Study Area and Shenandoah Mtn Crest	
22	Habitat for Small Game & Watchable Wildlife	7G	Pastoral Landscapes- Rangelands	
		8E4a	Indiana Bat Primary Protection Area	
		8E4b	Indiana Bat Secondary Protection Area	

# APPENDIX B. EVALUATION OF SOCIAL AND ECONOMIC SYSTEM SUSTAINABILITY

A. Introduction				

This appendix displays the relevant economic and social conditions related to National Forest System management as gleaned from two sources. First the Comprehensive Land Use plans developed by Counties of the Commonwealth of Virginia were reviewed for relevant county goals and strategies involving public land use. The second source reviewed was a social research analysis showing the degree of importance the public placed on certain values provided by the George Washington National Forest.

#### **B.** Use of County Documents

NOTE: THIS SECTION WAS PREPARED IN FEBRUARY OF 2007

County comprehensive plans have already considered changing conditions and trends that affect relevant economic and social indicators such as employment, income, capital, housing, fiscal health, individual's health, safety, and quality of lifestyle. In fact, it was the evaluation of a County's relevant social and economic conditions and trends that lead the County to adopt its comprehensive plan.

Thus, the County Comprehensive Plans and Economic Development documents serve as a functional equivalent "comprehensive evaluation reports" since they deal with social and economic conditions and trends. By reviewing a County's plan, the USDA Forest Service can determine what opportunities it has to contribute to a county's goals.

Deciding whether the current GW Plan guidance needs to change required an evaluation of each county's comprehensive plan.

County plans reflect the social, economic, and ecological values of the citizens in those counties. Citizens participated in developing or revising these county plans, which for the most part, were "issue-driven". Thus, social and economic sustainability for the purposes of this revision effort is being defined by the County Plans, which reflect the values of its citizens. The Forest then evaluates its contribution as a partner to achieving County Visions and goals as best it can.

In evaluating the County Plans, the Forest was looking not only for obvious links to National Forest System management, but was also looking for new issues (making the hidden obvious) that we weren't aware of that were important enough for County citizens that they were addressed in County Plans. Through this County Plan evaluation, the Forest was confirming data or values we already knew, and illuminating areas that we didn't know about but should know about.

In the end, the George Washington's revised plan should contain plan components providing strategic guidance that clearly contributes to maintenance or achievement of County goals.

This review only dealt with the land use ties at the strategic level to National Forest System management. In essence, the evaluation leads to identification of those county goals, objectives and strategies with land use ties to the National Forest. Two trigger questions were used in the following evaluation

Question: What are the long-term interests of the citizens of the counties and how do they compare with the mission of the George Washington National Forest?

Other question: What are the important roles and contributions the Forest Service can play, to achieve or maintain the goals, objectives and strategies of the counties that contain National Forest System land?

#### **County Evaluations**

#### 1. Alleghany County

See 2002 Alleghany County Comprehensive Plan.

The following summarizes the goals and objectives of the County that are related to NFS land management.

#### **Economic Development**

<u>Goal:</u> To enhance the economic base and employment opportunities in the County. Objectives:

Pursue programs and projects that will enhance the role of Alleghany County as a tourism destination.

Investigate acquisition and utilization of additional land conducive to economic development, such as properties along the I-64 corridor.

#### **Land Use**

<u>Goal:</u> To encourage desirable development and growth, while preserving the rural character of the County.

#### Objectives:

Protect and maintain the integrity of existing residential development.

Promote programs that enhance the value of the National Forest as recreational uses and for its natural beauty.

#### **Environmental**

#### Goal:

Protect and preserve the natural resources of the County with wise environmental management.

#### Objectives:

Preserve areas of unique scenic beauty and environmentally sensitive areas.

Encourage measures to improve water and air quality, and soil conservation.

Continue to enforce and encourage sound erosion and sedimentation control practices.

Work with the Virginia Department of Forestry to encourage citizens to develop "best management practices" relating to timber removal and for protection of our natural

resources; and encourage reforestation, both natural and planted, of harvested areas.

#### 2. Amherst County

<u>Amherst County</u> is in the process of developing their comprehensive plan. Their plan was not available at the time of this evaluation.

#### 3. Augusta County

See Augusta County's Comprehensive Plan.

The following summarizes the goals and objectives of the County that are related to NFS land management.

Goal:

Maintain the County's rural character and agricultural land uses.

Protect water resources and other critical environmental features.

Foster economic growth

#### **Natural Resources**

Goal:

As major groundwater recharge areas are identified, intensive land uses will be precluded in those areas in order to protect long term groundwater quality.

Development will be discouraged in the 100-year floodplain, and designated wetlands, and will be strongly discouraged on slopes exceeding 25% in order to protect water quality, natural system function, personal property and public safety.

Augusta County's <u>2002 Economic Overview</u> provides an information on the County's history and geography, population, labor and employment, markets and transportation, utilities, local government, taxes and finances, education and training programs, and living conditions.

#### 4. Bath County

Bath County's <u>2002 Economic Overview</u> provides an information on the County's history and geography, population, labor and employment, markets and transportation, utilities, local government, taxes and finances, education and training programs, and living conditions.

Bath County's 1999 Comprehensive Plan was reviewed. It is not available on the Internet.

The following summarizes the goals and recommendations of the County that are related to NFS land management.

#### **COMMUNITY FACILITIES GOALS**

- 3. Protect Bath County's reputation as a clean and desirable place to live.
- 4. Provide both athletic and non-athletic recreational activities to all age groups. Recommendations

f. Explore partnerships with the National Forest Service and the Department of Game and Inland Fisheries that will open up and enhance more public lands for recreational use.

#### **ECONOMY GOALS**

- 1. Strive to attract new and retain existing businesses and industries in the County.
- 2. Ensure that new business and industrial development occurs in suitable location and is compatible with Bath's environmental, scenic, and rural character.
- 3. Build partnerships that will provide opportunities for the County's labor force, as well as build local revenue.
- 4. Continue to promote tourism in Bath County

#### Recommendations

- c. Focus on maintaining the County's high quality of life, which serves as a major attraction for new employers and employees.
- e. Attract environmentally low-impact, high wage industries, such as those in the areas of technology, home-based businesses, and business incubators.
- j. Continue to strengthen Bath County's working relationship with agencies such as the Virginia Partnership and the Department of Business Assistance.
- k. Continue to increase and improve advertising and promotion efforts for local/regional tourism.

#### TRANSPORTATION GOALS

- 1. Encourage development of a safe, effective, and efficient transportation system that will shape and serve the future of Bath County.
- 2. Encourage greater utilization of existing and future transportation infrastructure to meet the social, economic, and environmental needs of Bath County.
- 3. Develop transportation plans and programs that respond to the needs of the elderly, disabled, and economically disadvantaged residents of Bath County.

#### Recommendations

- a. Maintain the existing primary and secondary road system at its current level, working with VDOT to ensure regularly scheduled maintenance and upgrades to meet existing and future traffic demand.
- d. Implement land use regulations promoting development that will maximize use of the existing transportation system without disruption of the minimum acceptable levels of service.
- g. Reconsider pursuing Route 220 Scenic Byway designation.

#### NATURAL ENVIRONMENT GOALS

- 1. Preserve and protect air quality in the Bath County vicinity.
- 2. Reduce potential environmental problems associated with Karst topography.
- 3. Conserve the County's soil resources.
- 4. Protect local water sources and unique aquatic habitats.
- 5. Minimize flood-related damage to structures, personal property, and public facilities.

#### Recommendations

- a. Seek the establishment of clean industries that do not produce harmful emissions.
- c. Consider geologic concentrations in areas before designating land uses.
- d. Amend the current zoning ordinance to prevent inappropriate construction, development, or site disturbance in areas with known Karst features.
- e. Work with the Department of Environmental Quality to monitor mineral resource exploration activities so as to ensure groundwater resources are not contaminated.
- h. Acknowledge the County's potential for affecting soil and water quality on a multiregional scale by supporting the Chesapeake Bay Program via Bath's Erosion and Sediment Control Ordinance.
- j. Pursue cooperative programs with neighboring counties to reduce pollutant discharges into streams and rivers.
- I. Encourage property owners in the floodplain to retain undeveloped property in a vegetated state.

#### LAND USE GOALS

- 1. Ensure that growth management schemes complement the County's natural, historical, and cultural setting.
- 2. Steer the location of any new development to correspond with existing or potential public utilities.
- 3. Ensure that effective land use planning is kept in balance with the freedom and rights of individual landowners.

#### Recommendations

- c. Preserve and protect the scenic beauty and wild character of the Cowpasture and Jackson Rivers, as well as others.
- e. Avoid developing on steep slopes (greater than 25%) due to potential problems with erosion, sedimentation, and water pollution.
- f. Avoid development within areas characterized by Karst topography so as to minimize structural instability and groundwater pollution.
- g. Discourage development of land areas within the 100-year floodplain of any river or stream.
- i. Develop and support the incentives and techniques described herein to preserve Bath's rural and historic character (agricultural and forestal districts, conservation easements, land use taxation, historical landmarks designation, Virginia Byway designation, and cluster development).
- m. Planned community growth areas in Bath County include the following:
- (1) Route 220 Corridor (north of Warm Springs south to Carloover)
- (2) Route 39 West (including Warm Springs)
- (3) Bacova
- (4) Cedar Creek (north of trailer park, south of Lower Cascades)
- (5) Millboro Springs and Millboro

#### 5. Botetourt County

See 2004 Updated Botetourt County Comprehensive Plan.

The following summarizes the goals, objectives, and policies of the County that are related to NFS land management.

#### **Economic Development**

<u>Goal:</u> To enhance the economic base and employment opportunities in Botetourt County.

Objectives:

Continue to identify appropriate locations for new office, commercial and industrial developments in locations that are compatible with nearby land uses, and future land use map development guidelines.

Provide assistance to existing businesses and industries that wish to expand in the County.

Develop adequate public facilities and services to meet the needs of an expanding economic base.

Coordinate closely with VDOT, and other agencies that can assist with economic development opportunities associated with new or expanding businesses.

Continue to pursue and facilitate work-force training opportunities that will assist new or expanding businesses

Coordinate closely with other local, regional, and statewide economic development organizations.

Policies:

Continue to evaluate the County's economic development objectives on a yearly basis.

Continue the County's Industry Incentive Program.

Continue, with the assistance of the REDP and the VEDP, to actively promote and market County-owned industrial development sites within Greenfield, EastPark and the Jack C. Smith Industrial Park.

As resources become available, implement planned public water and sewer extension projects and planned road improvements to accommodate future economic growth.

Use the future land use map and the zoning map to identify and reserve land areas suitable for future economic activities.

Continue to partner with local community colleges and the County school system to provide demand based community education, vocational education, and workforce training services.

Community Services and Facilities

<u>Goal:</u> To enhance the quality of life in the County by making government services more efficient and available.

Policies:

Continue to promote the County's proximity to the Appalachian Trail, National Forests, the Blue Ridge Parkway and the James River as important and accessible recreational opportunities.

#### Land Use

<u>Goal:</u> To achieve a balanced land use system that provides sufficient and compatible land areas for all community land use needs, while protecting sensitive natural environments, and important local historic and cultural resources.

#### Objectives:

Discourage scattered development patterns which are incompatible with the County's ability to provide adequate and cost effective public services and facilities.

Enhance the rural character of the County through the preservation of agricultural and forestal lands.

Implement appropriate policies and procedures to provide reasonable protection to the Blue Ridge Parkway and Appalachian Trail.

#### Policies:

Large residential, commercial and industrial development proposals should only locate in areas planned for the use, where there are adequate public facilities, and where the transportation system can accommodate the demands of the new use.

Encourage the conservation and preservation of major historic and archeological sites. Continue to provide comment on potential new sites within the County.

#### **Environmental Quality**

<u>Goal:</u> To maintain and enhance the County's high standard of environmental quality. Objectives:

Protect the County's natural resources including ground and surface waters, and air quality.

Maintain the rural character and scenic beauty of the County.

#### Policies:

Encourage the Department of Forestry to closely monitor all timbering operations to ensure they comply with all required environmental standards.

Continue to participate in the regional Early Action Compact as a strategy to avoid an EPA designation as an Ozone Non-Attainment area.

Review and comment on proposed National Forest Plans to ensure a coordinated effort in the protection and management of forest resources in the County.

Pursue programmatic and incentive based regulatory approaches to the protection of mountain ridgelines and critical mountain viewsheds.

#### 6. Frederick County

Frederick County's comprehensive plan was not available as of the date of this report.

The report titled <u>Winchester Frederick County: An Effective Workforce</u> discusses workforce demographics, major county employers, commuting patterns, unions, workforce productivity, and population projections.

The <u>Economic Development Commission's 2004 annual report</u> discusses trends in such items as taxation returns, taxable sales, unemployment rates, commercial and industrial revenue, average annual weekly wages, and personal income.

#### 7. Highland County

Highland County is in the process of revising its comprehensive plan. No more copies of the existing Plan are available as of the date of this report. It may be 2007 before Highland County has a revised comprehensive plan. Thus, their plan was not available as of the date of this report.

Highland County's <u>2002 Economic Overview</u> provides an information on the County's history and geography, population, labor and employment, markets and transportation, utilities, local government, taxes and finances, education and training programs, and living conditions.

#### 8. Nelson County

See Nelson County's Comprehensive Plan.

#### **Economic Development**

Goal – Support and encourage tourism as a viable means to diversify the local economy.

Principle – Support local tourism and link it to the region's many tourism programs.

Principle – Promote historic sites that are accessible to the public as part of the tourist economy.

Principle – Promote local greenways and other recreational opportunities to enhance tourism.

#### Natural, and Scenic, and Historic Resources

Goal – Recognize that the natural environment is an important facet of our quality of life and efforts should be made to support and enhance that environment.

Principle – Recognize the importance of ground water and surface water to the county by supporting guidelines for the protection of these resources and conducting additional water studies as needed.

Principle – Protect natural resources, including prime soils for agricultural use, groundwater, air, wetlands, and forest resources.

Principle – Recognize the county's major rivers and waterways as significant environmental resources and provide for their protection and appropriate use for recreation.

Goal – Protect the county's scenic resources as essential to the county's rural character, economic strength and quality of life.

Principle – Protect the county's scenic roadways by designating them as State Scenic Byways and by adopting a local scenic byways ordinance as needed. In particular, support designation of Route 29 from Woods Mill to the Albemarle County line and Route 664 as scenic byways.

Principle – Maintain areas of scenic beauty of the county's waterways and rivers as natural resources and in support of the county's tourism program.

Principle – Promote the preservation of the viewsheds of scenic vistas as an important part of the county's tourism program.

Principle - Discourage ridgeline development.

Goal - Preserve and protect the historic character and features of Nelson County.

Principle – Recognize and honor stewardship of historic properties and sites through, for example, the Historic Designation Program and through formal recognition by the Board of Supervisors.

Principle – Encourage the establishment of local historic districts in support of the county's tourism program and to protect their historical, architectural, and cultural significance. Lovingston and Schuyler, in particular, are appropriate for historic district designation.

#### Recreation

Goal – Promote a diversity of recreational opportunities for Nelson's citizens and for those who visit the county as tourists.

Principle – Promote recreation facilities that are county-wide resources for recreation and athletic events.

Principle – Support the development of county greenways, including the Blue Ridge Railway Trail, and new greenways, for recreation, and to preserve open space and protect river and stream corridors.

#### Blue Ridge Railway Trail

Principle - For increased recreational and tourism opportunities, provide access and connections to key destination points and attractions.

#### **Rural Conservation**

Goal - Maintain the rural character of Nelson County.

Principle - Protect sensitive rural areas such as steep slopes, river and stream corridors, prime farmland, old growth forests, and historic sites from encroaching development by discouraging rural growth in areas adjacent to these sensitive areas.

Principle – Protect rural scenic roadways through vegetative buffers between the roadways and new rural subdivision growth.

Principle – Protect scenic views and vistas by encouraging the siting of new buildings in conformance with the existing topography and into the existing landscape and vegetation.

Goal - Protect productive agricultural and forestal land.

Principle - Promote voluntary measures such as Agricultural Forestal Open Space designations and voluntary dedication of easements as undeveloped land.

#### 9. Page County

Page County's Comprehensive Plan is not available on the Internet at the time of this report. A hard copy of their plan was reviewed. The following summarizes the goals, objectives, and policies of the County that are related to NFS land management.

#### **COMMUNITY VISION STATEMENT**

Page County's vision is to promote an environment that is conducive to maintaining a rural quality of life, which enhances tourism and agriculture while encouraging compatible business growth resulting in a higher standard of living for our citizens.

#### **COMMUNITY GOALS**

<u>Goal 1</u>: Identify and encourage the preservation of historic resources and county heritage.

<u>Objective One</u>: Conserve the County's historic character and its historical and cultural resources, including historic sites and structures, archaeological features, and manmade landscape features for the aesthetic, economic, and educational benefits of present and future citizens.

#### **Policies**

- 1. Encourage and assist property owners to pursue State and National Register designation, either individually or through ... nominations.
- 4. Pursue the establishment of State and National historic districts, especially in rural areas, to officially recognize the historical significance and value of an area.
- 11. Incorporate historic resources in comprehensive efforts to promote tourism in the county by aiding in the development of a promotional brochure, a local historic plaque program, and self-guided driving tours.

<u>Goal 2</u>: Preserve and protect the natural, rural, and open space character of the unincorporated areas of the county.

<u>Objective One</u>: Preserve the natural beauty and protect the ecology of forested areas to ensure that development in those areas is in conformance with their environmental features and limitations.

#### **Policies**

- 1. Promote multiple uses of forested land that are non-intensive and compatible such as outdoor recreation, wildlife habitats, watershed protection, and timber harvesting.
- 2. Ensure that development on forest land is compatible wi1th the environmental features of that land and does not diminish natural and scenic values.
- 3. Encourage the voluntary placement of conservation easements on lands adjoining the Skyline Drive, Shenandoah National Park and Shenandoah River to protect the integrity of the park and other natural scenic attractions.
- 4. Promote buffer zones around national and historic areas.

<u>Goal 3</u>: Preserve and enhance the county's environmental quality <u>Objective One</u>: Protect natural resources, including soil, water, air, scenery, and fragile ecosystems.

#### **Policies**

- 1. Prohibit land uses that have significant adverse environmental impacts recognizing the interrelationship between natural resources, especially between ground and surface waters in Karst topography.
- 3. Manage and protect groundwater resources by:

- a) Establishing and maintaining a county-wide groundwater monitoring network by the voluntary testing of private residential wells on an annual basis.
- d) Participating and cooperating in federal and state groundwater protection programs.
- 4. Manage and protect surface water resources by:
- f) Improving the management of publicly owned lands along the river.
- 5. Manage and protect floodplains by:
- a) Allowing only limited agricultural open space uses that are least subject to loss of life and property damage in the 100-year flood plain.
- 6. Protect local and regional water resources through the application of the Chesapeake Bay Management Regulations to environmentally sensitive areas such as perennial streams, floodplains, wetlands, steep slopes, and highly erodable soils.
- 9. Promote the concept of linear Greenways and other public access to link natural, cultural, and scenic resources such as designated scenic rivers, designated scenic highways, registered historic properties, permanent open space easements and the designated National Park, National Forest and the Appalachian Trail Systems.

<u>Goal 4</u>: Encourage and develop a diverse and viable local economy compatible with the county's rural character and size.

<u>Objective Two</u> Encourage economic growth that is compatible with the County's rural character and provide a positive net cash flow for county finances.

#### **Policies**

- 3. Actively promote tourism as a suitable and appropriate form of economic development.
- 4. Foster cooperation among tourist related organizations and businesses recognizing the economic impact of the tourism industry.
- 5. Protect and enhance the environmental resources of the county, recognizing they can serve as an attraction to agricultural, business and industry as well as providing hunting and fishing for local residents and tourists.
- 7. Encourage the attraction of business activities that promote the vertical and horizontal integration of existing industrial and commercial activities in the county, particularly active farming and forestry operations.
- 15. Study the potential for the establishment of a federal or state wildlife refuge or recreation area on the Shenandoah River as a tourist attraction that could have potential economic benefits to the County.

<u>Goal 5</u>: Promote initiatives to upgrade the quality of life and standard of living for residents.

<u>Objective Four</u>: Achieve a balance between the property rights of individuals and the protection of the health, safety and welfare of the public.

#### **Policies**

3. Promote the philosophy that land, air and water are finite resources and commodities, and that all citizens are guardians of these natural resources, and its protection is of primary importance to each present and future citizen.

Goal 6: Provide efficient public services.

<u>Objective One</u>: Provide community facilities and human services which are progressive, accessible and responsive to the needs of the community. Policies

a. Promote the development and use of a bike-walkway system in the community to support the conservation of natural resources, exercise and outdoor recreation.

### Economic Development Recommendations for Page County (Comprehensive Plan, page 138)

In order to preserve Page County's rural character, planning policies must promote the retention of a strong farming economy in the rural areas. A prosperous farming community will not only ensure that the sale of agricultural products will remain one of the county's chief income earners, it will reinforce an expanding travel industry and environmental conservation. Agriculture maintains the county's scenic viewshed that is so appealing to millions of tourists who visit the Luray Caverns and Skyline Drive annually. It also protects invaluable ground water resources and provides appealing green space that is becoming an increasingly important factor in the decisions of individuals and businesses in locating to an area.

County Planners should actively adopt measures to promote the county's travel industry. Besides maintaining the rural green space and scenic viewshed, tourist related activities should be diversified. Heritage tourism and the growing inn and guest farms should be encouraged to expand in the incorporated and rural areas of the county as long as their size, location and aesthetics are compatible with the overall character of the areas in which they are situated.

#### 10. Rockbridge County

See Rockbridge County's Comprehensive Plan.

The following summarizes the goals, objectives, and strategies of the County that are related to NFS land management.

#### LAND USE GOALS

<u>Goal</u>: Enhance, protect and preserve the ambiance and environmental quality of Rockbridge while promoting a greater awareness of the scenic beauty and other positive attributes of the County. Maintain areas in their rural state and attempt to protect sensitive and unique land resources from degradation. Agricultural areas are to be maintained, and incompatible land uses (such as commercial and industrial development, dense residential development and their related public improvements) shall be discouraged in rural areas.

<u>Objective:</u> Promote the conservation of open space within the County and actively promote the long-term preservation and maintenance of valuable natural resource areas through public acquisition, continued support for and implementation of usevalue taxation, increased regulatory control over and fees associated with new development and other cooperative efforts.

#### Strategy

4. Recognizing projected levels of natural resource demand, allocate sufficient land areas within the Future Land Use Plan for open space, as well as agricultural, forestry and recreational uses.

- 5. Potential natural resource sites should be identified and managed for sustainable use.
- 6. The preservation and enhancement of agriculture and forestry is a fundamental cornerstone of the social, environmental, economic and cultural character of Rockbridge County. The Plan shall establish Rural Preservation Planning Areas for the purpose of delineating and guiding land use policies for these areas.
- 9. Woodlands and open spaces along County road corridors should be preserved.
- 10. Endorse the Virginia Department of Forestry's recommended forest management practices.
- 11. Identify specific measures to aid the County in its ongoing efforts to preserve rivers and streams for the purpose of preserving their natural beauty and environmental attributes, while maximizing recreation potential and conservation opportunities, and locate specific geographic areas where these measures may be applied.
- 12. Discourage the development of permanent structures in areas situated within the one hundred-year-floodplain.
- 15. Protect the quality and reliability of the regional aquifer by establishing guidelines for the judicious use of groundwater supplies.
- 16. Regulate development in karst areas in order to reduce the hazards of ground subsidence and collapse and the hazard of groundwater pollution.

<u>Objective:</u> Create a rational balance between the management and preservation of the County's rural areas and the accommodation of fiscally responsible growth and economic development.

#### Strategy

6. Develop and implement procedures that will promote the conservation of environmentally sensitive land areas that would be adversely impacted by new development and redevelopment activities.

<u>Goal:</u> Protect and enhance both existing and future development in Rockbridge County through pro-active growth management programs, including the implementation of modern zoning strategies and progressive community design guidelines.

<u>Objective</u>: Protect and enhance the unique qualities of Rockbridge County's small County atmosphere, as well as its sense of history and place.

#### Strategy

- 1. Promote development opportunities that respect, preserve and protect the County's ambience, historic properties, riverfront areas and sensitive environmental areas.
- 10. Develop economically feasible strategies for minimizing the visual impact of electrical power lines, telephone lines, television cables on principal, and entrance corridor viewsheds.
- 11. Explore the potential for establishing a Mountaintop Development Ordinance, which would be designed to protect valuable ridgelines and scenic viewsheds from future development using a threshold elevation to be established by the Board of Supervisors.

14. Encourage development applicants to dedicate right-of-way within their projects to accommodate "hiker-biker paths."

#### **Rockbridge County Economic Development Strategic Plan**

Mission Statement

To enhance economic conditions within the Rockbridge area, in conjunction with the governing bodies of Buena Vista, Lexington and Rockbridge, while maintaining the area's unique heritage and natural resources.

**Goal Statements** 

- 1. Diversify and expand quality employment opportunities within the Rockbridge area.
- 2. Facilitate a continuing cooperative and effective economic development environment among the Rockbridge area communities.
- 3. Expand the local tax base and increase the revenue producing capabilities of the Rockbridge area.
- 4. Support existing industry in their efforts to increase profitability and enhance sustainability.
- 5. Encourage the development of a diverse, properly trained, and committed workforce.
- 6. Maintain and enhance the quality rural environment and small town character of the Rockbridge area.
- 7. Promote the Rockbridge area as the center of quality within the Shenandoah Valley.

Rockbridge County's <u>2002 Economic Overview</u> provides an information on the County's history and geography, population, labor and employment, markets and transportation, utilities, local government, taxes and finances, education and training programs, and living conditions.

#### 11. Rockingham County

See Rockingham County's Comprehensive Plan.

The following summarizes the goals, strategies, and policies of the County that are related to NFS land management.

#### Vision of the Future of Rockingham County

**Overall Vision** 

In the year 2020 and beyond, Rockingham County will become an even better place to live, work and recreate for its residents and for visitors. The County will retain the essential historic attributes that make it a great place, including the clean natural environmental resources, the beauty of the farmland and mountains, the harmonious relationship between agricultural and residential land uses, the balanced and vibrant economy and the diverse yet harmonious society with many different cultures. Rockingham County will allow for healthy, managed growth while protecting and capitalizing on the assets which have encouraged people to come here in the first

place. The actions of citizens and businesses of the County will reflect our understanding that we do not "own" the land; rather we only borrow it from our children. The County will be a place where our children can live and enjoy the same and better quality of life that we have enjoyed.

#### Agricultural, Environmental and Historic Resources

We will have improved the quality of our air, water and soil resources through well planned development and good farming practices that will create a truly sustainable agriculture. Our rivers, creeks and groundwater resources will be in a nearly natural condition. We will have protected our environment by ensuring that farming, industrial and development practices do not deplete or contaminate natural resources. We will have protected and preserved our archeological and historic buildings and sites for the benefit of future generations.

#### **Transportation**

Multi-use pathways will have been developed along major roadways to create a Countywide network for pedestrians, bicycles and buggies. The existing state road network will have been upgraded in key locations to create a good road network linking major communities.

#### **Economy**

Tourism and technology businesses will have driven expansion of the local economy.

The County may pursue the development of trail systems within the environmental reserve to connect the National Park and Forest to the towns and planned growth areas (Plan pages 2-13 and 2-19).

<u>Goal 1.</u> Preserve the Quality of Natural Resources. (surface water, groundwater, air, soil, quiet, night sky)

Strategy 1.1: Protect water quality.

Policies and Implementation Actions:

- 1.1.2. Continue to participate in TMDL (total maximum daily [pollutant] load) water quality studies for impaired streams.
- 1.1.9. Promote the setting aside of floodplain lands as open space during the development process to form the backbone of a countywide greenway system for flood protection, water quality protection, wildlife habitat preservation, and passive recreation.

<u>Strategy 1.2:</u> Protect community water supply sources.

Policies and Implementation Actions:

- 1.2.4. Expand cooperation with other water providers to address regional needs.
- 1.2.7 Encourage, through the development approval process, the establishment of buffers 100 feet in width along major stream corridors and tributaries, defined as those watersheds which drain an area of one square mile or greater. Such buffers should be maintained in a natural condition with little or no clearing, grading or other land disturbing activity, except for that necessary to locate any essential utility lines or similar public facilities. Provide for such buffers to be created through the clustering of development density so as to maintain a reasonable overall development potential for tracts affected by the stream buffer policy.

Strategy 1.3: Protect environmentally sensitive areas.

Policies and Implementation Actions:

- 1.3.3. Incorporate BMPs into land development regulations in both the Zoning and Subdivision Ordinances.
- 1.3.4. Identify and protect habitats of rare and threatened species.
- 1.3.7 Encourage all roadways and utility lines to be designed and located to fit the existing topography and to avoid areas with slopes of greater than 15%.
- 1.3.8 Maintain natural drainage channels wherever possible as new development occurs, with particular focus on those areas with slopes greater than 15%.
- 1.3.9 Encourage the maximum retention of existing vegetation and topography as a site is developed, in both urban and rural areas. Encourage existing features to be incorporated into the development design to the maximum extent possible.
- 1.3.10 Encourage the long term conservation of forest resources through the balanced and multiple use of forest resources for recreation, tourism, scenic value, flood control, timber production and wildlife management.
- 1.3.11 Encourage property owners who wish to harvest their timber resources to develop a Forest Management Plan in cooperation with the Virginia Department of Forestry.

Strategy 1.5: Identify and quantify air quality and noise concerns.

Policies and Implementation Actions:

1.5.5 Encourage the use of alternative travel modes such as rail, bicycle and pedestrian through a variety of methods including mixed use and clustered developments, recreational trail systems and pedestrian-friendly street designs.

<u>Goal 2.</u> Preserve the Scenic Beauty of the Landscape. (farm fields, vistas, mountains, forests, open land, parks and recreation areas)

Strategy 2.2: Protect visual resources.

Policies and Implementation Actions:

- 2.2.2. Based on a scenic resources inventory, consider designation of appropriate roads as Virginia Byways.
- 2.2.5 Consider the impact on views in land use decisions.

Goal 5. Achieve a Strong and Compatible Tourist Industry.

<u>Strategy 5.1</u> Capitalize on the economic assets of natural beauty and historic resources.

Policies and Implementation Actions:

- 5.1.1. Identify and assess the value of historical, recreational and natural environmental assets to the tourism economy.
- 5.1.3. Determine measures to protect views.
- 5.1.4. Explore ways to direct visitors of the National Park to other attractions in the County.

5.1.5. Work with area tourist attractions, such as Massanutten Resort, on tourism promotion.

<u>Goal 6:</u> Achieve a Balance of Compatible Land Uses and Communities in which people can live, work and play.

Strategy 6.2: Achieve coordinated development with adjoining localities.

Policies and Implementation Actions:

- 6.2.3. Consult between localities when development plans will have impacts across boundaries.
- 6.2.4. Work with adjoining localities to plan for economic development.

<u>Goal 11.</u> Preserve/Improve Accessibility of Non-Motorized Traffic (pedestrians, bicycles, horses, buggies).

Strategy 11.1 Promote alternative non-motor vehicle modes to roadways.

Policies and Implementation Actions:

- 11.1.1. Encourage the use of bicycles in the design of new roads and developments.
- 11.1.3 Develop a greenway plan identifying priority trails, connections, opportunities, and constraints.

Goal 12. Preserve Historic Buildings and Sites

<u>Strategy 12.1:</u> Promote the preservation of historic resources through the development review process and through voluntary measures.

Policies and Implementation Actions:

- 12.1.2 Encourage the adaptive reuse and rehabilitation of existing historic structures for new, compatible uses, while retaining the integrity of the structure.
- 12.1.3 Encourage the preservation of historic structures and sites by incorporating them into the design of new development projects.
- 12.1.6 Foster a strong and complementary relationship between tourism promotion and historic preservation efforts, including the promotion and awareness of the County's historic resources through the economic development efforts associated with the tourism industry.
- 12.1.7 Encourage the use of conservation easements to preserve land and structures of scenic and/or historic significance.
- 12.1.8 Work with Federal, State, Regional and neighboring local officials to coordinate and reinforce efforts to promote historic preservation efforts and programs.

Rockingham County's <u>2002 Economic Overview</u> provides an information on the County's history and geography, population, labor and employment, markets and transportation, utilities, local government, taxes and finances, education and training programs, and living conditions.

#### 12. Shenandoah County

See Shenandoah County's Comprehensive Management Plan.

The following summarizes the goals, objectives, and strategies of the County that are related to NFS land management.

SHENANDOAH COUNTY 2025 – "THE VISION"
In the year 2025, Shenandoah County will still be a primarily rural community that:
□ Protects its natural resources
☐Directs its growth to the towns ensuring its open, agricultural character
☐Provides a variety of jobs in business, light industry, tourism, and sustainable agriculture
☐ Maintains moderate growth of a demographically varied population
☐Supports safe and efficient interstate transportation and maintains the rural character of its primary and secondary roads
☐ Affords its students excellent and appropriate education
$\square$ Serves its citizens with public facilities and services that enhance their quality of life
☐Ensures preservation of its natural beauty and unique, historical character by

#### 1. NATURAL RESOURCES

Goal - Preserve and enhance the natural environment of the County.

strictly adhering to the goals and objectives of the Comprehensive Plan.

<u>Objective A</u> - Protect the natural environment from damage due to development activity.

<u>Strategy 1</u>) - Protect the natural resources and respect development limitations of slope, soils, geology, and water resources.

<u>Objective B</u> - Provide for development according to the carrying capacity of the environment.

Strategy 1) - Through the use of overlay zones, limit development in areas identified as having high potential for groundwater pollution; protect sinkholes.

<u>Objective C</u> - Preserve and adopt specific measures to protect the Shenandoah River, other streams, and the County's ground water.

<u>Strategy 3</u>) - Identify priority watersheds; identify and adopt specific measures to protect sinkholes, streams and wetland areas.

#### 2. REGIONAL SETTING & HISTORY

Goal - Protect and promote the historic resources in Shenandoah County.

Objective A - Preserve individual properties and sites throughout the county.

<u>Strategy 1)</u> - Complete additional surveys and nomination of eligible properties and rural historic districts to the Virginia and National registers. In addition to many individual historic homes and buildings, Shenandoah County contains several unincorporated villages that may be eligible for historic designation.

<u>Strategy 3</u>) - Publicize historic features of Shenandoah County and tax incentives and other preservation programs available to assist property owners with preservation initiatives. Encourage private preservation of historic resources.

Objective B - Protect and enhance battlefield sites throughout the County.

<u>Strategy 1</u>) - Support the implementation of Shenandoah Valley Civil War Battlefields National Historic District preservation plans in the County:

#### 3. LAND USE

<u>Goal</u> - Guide and direct growth into and around the towns and public service areas, while preserving the rural and open space character of the balance of the County.

<u>Objective B</u> - Maintain the rural and open space character of areas outside of the public service areas.

<u>Strategy 4)</u> - Encourage rural property owners to place their land in agricultural or forestal districts.

<u>Strategy 5</u>) - Encourage the use of conservation, scenic, historic and other voluntary easements to permanently preserve land.

<u>Strategy 6</u>) - Consider the purchase of development rights of strategically located high quality rural property.

<u>Objective C</u> - Guide future commercial land uses to locate where there is access to major transportation corridors and where public utility services are available.

<u>Strategy 2</u>) - Provide for adequate access and for avoiding congestion along roadways.

<u>Strategy 3</u>) - Coordinate placement of utilities with developers and the towns/service authorities.

<u>Objective D</u> - Guide future industrial land uses to locate near the interstate corridor and interchanges where public utility services are available and adequate transportation facilities exist:

<u>Strategy 2</u>) - Provide for adequate access and for avoiding congestion along roadways, accommodating safe and efficient movement of people and goods.

<u>Strategy 3</u>) - Coordinate placement of utilities with developers and the towns/service authorities.

<u>Strategy 5</u>) - Encourage light non-polluting industry and business that will benefit the economy and ecology of the County.

<u>Strategy 7</u>) - Ensure there is adequate ground or surface water to support any new industry.

#### 4. ECONOMY

<u>Goal</u> - Create a business climate conducive to economic activity and encourage a diversity of business and industry in the County.

<u>Objective A</u> - Encourage the development of existing and new commercial and industrial activities.

<u>Strategy 2</u>) - Encourage light, non-polluting industries and businesses that will benefit the economy and ecology of the County.

Objective B - Support travel and tourist related activities.

Strategy 1) - Promote tourism and destination marketing.

Strategy 2) - Encourage the protection of scenic beauty and historic sites.

Strategy 3) - Enhance recreational facilities.

<u>Strategy 4)</u> - Support the implementation of the Shenandoah Valley Battlefields National Historic District, the interpretation of Civil War sites and related tourism and travel activities.

#### 7. TRANSPORTATION

Goal - Provide a safe and efficient transportation system throughout the County.

Objective A - Integrate transportation planning with land use planning.

<u>Strategy 1)</u> - Coordinate land use planning and decisions with transportation planning.

<u>Objective B</u> - Improve the secondary road system in the County while maintaining the rural character of the County:

Strategy 1) - Widen rights-of-way and roadways only where necessary for safety.

Strategy 2) - Improve existing roadway surfaces with pave-in-place.

Strategy 3) - Develop better drainage along roads where flooding occurs.

#### SPECIFIC IMPLEMENTATION ACTIONS

#### **Natural Resources**

4. Aggressively pursue expansion of Best Management Practices in riparian areas. Increase number of miles of stream bank protection by 10% per year, '06-'10.

#### Land Use Controls and Residential Development

4. Develop special ordinances/overlay districts to protect sensitive land and water resources from potential pollution and to preserve battlefields and other historic, scenic, and cultural resources.

#### **Economic Development and Tourism**

- 6. To enhance the role of tourism as an engine for economic prosperity:
- a. Form a county-wide Chamber of Commerce.
- b. Develop plans for a full-service County Tourism and Information Center, to become operational by 2012.
- c. Identify specific scenic vistas throughout the county, erect appropriate roadside markers, and promote procedures for protecting, insofar as possible, those vistas from encroachment.

#### Water Resources Recommendations

Objective A. Efficiency in use of existing supplies and facilities

1. Develop a county-wide water conservation plan with emphasis on public education and the nurturing of an ethic which promotes the voluntary conservation of water resources as a way of life in Shenandoah County.

Objective B. Appropriate development of new supplies or facilities

1. Maintain and improve as necessary existing public water supplies and wastewater facilities 4. As a member of the Regional Water Resources Policy Committee, support planning for augmenting the flow of the North Fork by 2015. Impoundment of a significant amount of water for release as needed during periods of extreme drought is indicated.

#### Objective C. Protection of Water Resources

1. Address nonpoint source pollution by promotion of agricultural, urban, forestry, and other BMPs; cooperation with the Natural Resources Conservation Service and

Cooperative Extension Service to implement BMPs; promotion of techniques to reduce agricultural and household chemical use; and appropriate enforcement of the Erosion and Sediment Control Law.

- 4. Use available local tools to protect groundwater from contamination by underground storage tanks, animal wastes, biosolids, excessive fertilizer and pesticide use (both agricultural and residential), or other threats as identified.
- 6. Locate sinkholes and sinkhole dumps, and implement sinkhole protection with a sinkhole ordinance.
- 9. Support the efforts of the U.S. Forest Service and the Virginia Department of Game and Inland Fisheries to mitigate the acidification of coldwater streams.
- 11. Encourage riparian landowners to maintain streambank vegetation and minimize disturbances in riparian areas in order to protect stream habitat and water quality. Encourage landowners to apply to have riparian land placed in the Conservation Reserve Program or conservation easements.

#### 13. Warren County

See Warren County's Comprehensive Management Plan.

The following summarizes the goals, objectives, and implementation actions of the County that are related to NFS land management.

Vision

Warren County's Vision is that they must maintain and enhance the quality of life for the residents of Warren County. To do so, the quality and character of Warren County's natural resources should be preserved, conserved, and used effectively to ensure that future citizens will enjoy the benefits of An adequate, sustainable, clean, and potable supply of both surface water and ground water; Clean air; Farming and open spaces; The beauty of our rivers, mountains, and scenic views; Protection of our rural character; Quality educational facilities and system; A balanced tax base; and Sound fiscal management.

The overall goal of their comprehensive plan is to: Maintain and enhance the quality and character of Warren County's natural and man-made environment by promoting the efficient use and conservation of the County's land and natural resources in order to effectively meet the social and economic needs of present and future citizens.

#### **Environment and Natural Resources**

<u>Goal:</u> To preserve and improve the environmental quality of Warren County through measures which protect natural resources and environmentally sensitive air, lands, and waters.

#### Objectives:

A. Institute measures to protect the quality of surface waters within the County, including the Shenandoah River's North and South forks, creeks, runs, and smaller tributaries of the Shenandoah River, as well as, watershed and associated tributaries which drain into the environmentally sensitive Potomac River and the Chesapeake Bay.

- B. Protect and conserve fragile ground water resources within the County's unique hydrology (i.e. karst terrain and thin soils).
- D. Protect County wetland resources, including springs.
- E. Protect and conserve public and private forest resources to prevent soil erosion and damage to views, vistas, and watershed areas.
- F. Protect the important natural function of rivers, streams, and floodplains by encouraging appropriate use and preservation of natural vegetation.
- G. Minimize runoff and sedimentation associated with agricultural and development activities (including industrial, residential, and commercial activities) particularly in steep slope areas.
- H. Identify and protect important plant and wildlife habitats, including aquatic life.
- J. Coordinate environmental quality protection efforts with the establishment of public parks, natural recreation areas, and natural resource regeneration and preservation.
- K. Improve environmental quality on a site-by-site basis through the establishment of performance standards for environmentally sensitive areas.
- L. Educate Warren County residents about the implications of mankind's actions upon the natural environment.
- M. Preserve Warren Countys' natural beauty, while making natural features accessible to County residents.

#### Implementation

**Coordination With Other Agencies** - The increased pressure on animal habitats in the National Park and in the County makes it essential that greenways and travel corridors, in cooperation with the National Park and the National Forest, be established in appropriate areas. This would help increase the area's animal carrying capacity which is so important to tourists, conservationists, and hunters.

Extend bike and hiking paths – Cooperate with the Town of Front Royal to extend Front Royal's biking and hiking paths into the County, along the south fork of the Shenandoah River and along Routes 55 E., 340 S and 522 S. Greenways should be established in sufficient width to assure preservation of natural tree growth and seasonal beauty such as trillium, as well as dogwood and redbud trees with which the County is blessed. Such paths and greenways should lead visitors into areas which would expose them to the year round beauty of our mountains, the bursting forth of life in the spring, and the riot of fall color.

Preserve Natural Vegetation - Expressly prohibit site clear-cutting, thereby preserving natural vegetation and trees during development. Require the protection of mature trees and vegetation preservation during development. If tree removal is unavoidable, require replacement plantings. Encourage generally accepted good forest management practices when private logging operations are anticipated. Where vegetation is removed, require grass seeding for erosion control.

**Recreation** - Provide varied access to natural features through means such as biking and hiking paths and public access to the Shenandoah River and tying into existing bike paths. This will allow residents and visitors to enjoy the County's recreational opportunities.

Views/Vistas, Tourism, and Rural Character - To preserve views from the Skyline Drive and vistas along County roads, both vital to tourism and rural character, discourage clear cutting and unnecessary tree cover and other natural vegetation reduction by application of best management practices. Encourage cluster development and discourage strip development.

#### **Growth Management and Land Use**

<u>Goal:</u> To direct future development into an efficient and serviceable form that will preserve the County's predominately rural character.

#### Objectives:

- D. Discourage growth in environmentally sensitive areas that have natural development constraints, such as wetlands, steep slopes, karst terrain, and flood plains.
- H. Develop a preservation plan that identifies and protects historically significant areas, sites, and properties.
- J. Maintain the County's rural character.

#### Implementation

**Stream Buffer Zones** - Designate stream buffer zones to protect water quality, establishing buffer zones along streams where commercial logging operations and other development activities are occurring.

#### **Environmental Aspects of Land Use In Warren County**

<u>Goal:</u> Develop Warren County land in accordance with local, state, and federal standards that provide the best possible quality of life.

#### Objectives:

- B. Protect fragile groundwater and surface water resources.
- E. Identify and seek to retain significant views and vistas along the Skyline Drive and County roads.
- F. Encourage unnecessary reduction of tree cover and other natural vegetation while allowing for reasonable land use.
- G. Encourage tree planting along public roads to preserve rural character and value.
- I. Develop performance standards for karst and other sensitive areas.
- J. Prevent dumping in sinkholes and provide incentives for cleaning up such areas.
- K. Maintain litter free public highways and other public areas.

#### Implementation

**Drainage Preservation Easements** - The preservation of natural drainage shall be incorporated into development plans for the proposed land area.

#### **Rural Character and Agricultural Preservation**

<u>Goal:</u> Preserve the County's rural character by preserving open space, as well as agricultural and forest lands.

Objectives:

E. Utilize natural topographic features and/or planting screens to shield development from public roads and adjoining properties, thereby preserving scenic vistas and rural character.

F. Avoid significant modification of the existing terrain and prohibit development of environmentally sensitive areas, such as floodplains and steep slopes exceeding 10%. Require special permits for development for slopes over 15%.

I. Designate some of the most scenic roads in the County as Scenic Highways and Byways, thereby preserving scenic rural views and vistas. The State has designated Route 55 East as a Scenic Highway. Other possible candidates include: Route 340 South, Route 522 South, Browntown Road, Morgan's Ford Road/Milldale Road, Rivermont Road, and Reliance Road.

#### Implementation

Views/Vistas, Tourism, and Rural Character - To preserve views from the Skyline Drive and vistas along County roads, both vital to tourism and rural character, discourage clear cutting and unnecessary tree cover and other natural vegetation reduction by application of best management practices. Encourage cluster development and discourage strip development.

#### **Forest Land Management and Preservation**

<u>Goal:</u> To preserve the community's rural character and preserve forest land, and other environmentally sensitive areas, by managing and maintaining forest resources during the development process.

#### Objectives:

- A. Adopt performance standards and a review process for the commercial and noncommercial forest cutting of any area exceeding one acre.
- B. Develop standards to protect ridgelines.
- C. Provide limited forest cutting in stream, wetland, and river areas. Implementation

**Ordinance Revision** – Continue to require as part of the County's Zoning Ordinance that commercial forest activities, including sale of trees, in residential areas be conducted in accordance with the guidelines established in the Virginia Department of Forestry's latest edition of *Logger's Guide*. To prevent clear-cutting, there shall be no cutting of trees with a diameter of eight inches or less (25-inch circumference). No commercial forest cutting in residential areas should occur without County review.

**Stream Buffer Zones** - Designate stream buffer zones to protect water quality. Establish buffer zones along streams where commercial logging operations and other development activities are occurring.

**Timber Resources** - Commercial and non-commercial forest cutting should be conducted to ensure long term forest viability and to minimize negative environmental impacts, particularly along streams, rivers, and wetlands. Water resources can be protected by providing buffer zones along these environmental features.

#### **Public Lands**

Goal: Utilize public lands as a resource in maintaining the County's rural character.

#### Objectives:

- C. Monitor State and Federal agencies development plans and work with those agencies to ensure activities consistent with the County's rural character.
- D. Maintain the Shenandoah River's scenic nature by minimizing development within the floodplain. Designate the river as a greenway for recreational and flood control purposes.

#### Implementation

Shenandoah National Park and George Washington National Forest assist Warren County in providing resource management providing the County with open space and aid in maintaining the community's rural character. These areas also serve as an economic development tool of the tourist industry. Each year, thousands of people visit these federal lands and many contribute to the local economy during their visit. Continued cooperation between the County and the federal agencies overseeing these lands is crucial in meeting many of this plan's goals.

#### **Historic Preservation**

Goal I: To mitigate the impact on historic structures and properties imposed by new development.

<u>Goal II:</u> To maintain the Warren County historical assets that preserve the County's character.

#### Objectives:

- C. Preserve the heritage, contributions, and interests manifested by the Native American Cultures.
- D. Provide opportunities for County residents and visitors to interact with historic and cultural influences that would enhance their appreciation of these County life qualities.

#### Implementation

**Historically Significant Open Spaces** - Encourage and assist property owners to voluntarily place scenic easements on lands associated with historic buildings, sites, and archaeological resources representing all of the County's historical time periods and cultures.

**State and Federal Programs** - Support state and federal programs, such as the National Register of Historic Places, which fosters incentives for structures' protection or restoration.

**Support Archaeological Research** - Support archaeological research through preservation and through encouraging developers to allow archaeologists a limited time to excavate the proposed site before development begins.

**Tourism** - Promote the County's historic sites through tourism, via such items as pamphlets distributed by the Chamber of Commerce and by other organizations.

#### Parks and Recreation

Goal I: To provide a variety of quality recreational opportunities in Warren County. Goal III: Expand recreation activities and sites to all areas of the County. Objectives:

- E. Coordinate natural resource protection efforts with future County park, open space, and recreational land use opportunities.
- F. Provide adequate waterfront recreation access to County residents.
- G. Work with state to improve existing river access points.
- Q. Provide for the preservation of open and wooded space, and selected flood plain areas, as greenways.

Implementation

**ISTEA** - Apply for ISTEA program grants for the acquisition and development of trails and greenways.

Nature Trails (hiking, cross country skiing and biking) - These needs can be met through Warren County's and Front Royal's joining adjacent counties to produce Greenways and Trails. These trails would link park lands, conservation areas, scenic landscapes, and historic/cultural sites. Initial projects would extend the Town's proposed trails' plan into the County to link State and Federal Parks with the Town's existing facilities. Such a project could use existing rights-of-way (i.e. road shoulders).

Scenic Byways - Support the Virginia Scenic Byways and Scenic Rivers programs.

**Tourism** - Capitalize on the area's tourism through publication of recreational site locations and activities, public waterfront access locations, and Community programs and events.

**Waterfront Access** - Acquire land along both forks of the Shenandoah River to ensure public access to the river.

#### **Economic Development**

<u>Goal I:</u> Maintain an effective business environment which fosters the growth and prosperity of existing industries.

Goal III: Develop a comprehensive plan to attract tourists.

Objectives:

- C. Increase the number of group tours and festivals in the community.
- D. Attract the individual leisure traveler.
- E. Attract Shenandoah National Park visitors.

Implementation

**Tourism** - Continue to emphasize and promote tourism as an industry. This should be accomplished through coordination with local, regional, and State tourism development Boards and agencies.

#### **Stormwater Management**

<u>Goal</u>: To prevent Stormwater Runoff from site development through maintaining predevelopment conditions.

Objectives:

- B. Minimize erosion potential from development or construction sites.
- C. Assure that existing and proposed culverts and bridges are adequate.
- D. Increase water recharge into the ground through using retention and detention ponds.

F. Reduce stream bank erosion to maintain stream channels for their biological functions as well as for drainage.

#### **Transportation**

<u>Goal:</u> To provide for the safe and efficient movement of people and goods throughout the County.

Objectives:

- B. Maintain and improve existing transportation facilities to meet increased demand.
- C. Examine the potential for protecting scenic beauty and improving safety without compromising safety on the following roads: Rt. 340 South and Rt. 55 West.
- J. Decrease the need for automobile trips by providing mixed use developments, pedestrian access, and bike paths.
- K. Apply for Intermodal Surface Transportation Efficiency Act (ISTEA) funds to improve the existing transportation system and to provide alternative transportation modes such as biking and hiking trails.

Implementation

Access Management - Create, initiate, and support an access management program. Rights-of-Way Reservation and New Road Construction - Preserve rights-of-way for road improvements consistent with the Comprehensive Plan, the State Transportation Plan, and the CIP.

#### 14. West Virginia Counties

Comprehensive planning has not yet occurred as of the date of this report.

#### C. Summary of Public Survey Report of July 2002

Source: Cordell, Kenneth et al, July 2002, <u>A Survey of Residents of the Greater Southern Appalachian Region</u> to Describe: Public Use and Preferred Objectives for Southern Appalachian National Forests, Public Survey Report, George Washington and Jefferson National Forests.

Value Questions

The report describes **different values** that could be emphasized in the management of the George Washington and Jefferson National Forest. From the report, the following is the ranking of questions to those who responded 4 or 5, in other words important to extremely important end of the scale.

George Washington NF Positive %	Jefferson NF Positive %	How important is
---------------------------------	-------------------------------	------------------

George Washington NF Positive %	Jefferson NF Positive %	How important is
91%	95%	Protecting streams and other sources of clean water in managing our National Forests?
93%	94%	Maintaining national forests for future generations to use and enjoy in managing our National Forests?
86%	91%	Providing habitat and protection for abundant wildlife and fish in managing our National Forests?
86%	91%	Using and managing forest areas in ways that leave them natural in appearance in managing our National Forests?
84%	90%	Emphasizing planting and management of trees for healthy forests in managing our National Forests?
84%	85%	Protecting rare, unique, or endangered plant and animal species in managing our National Forests?
80%	83%	Providing information and educational services about forests, their management, and the natural life in them in managing our National Forests?
74%	81%	Providing quiet, and natural places for personal renewal in managing our National Forests?
72%	77%	Providing access, facilities, and services for outdoor recreation in managing our National Forests?
72%	71%	Emphasizing planting and management of trees for an abundant timber supply in managing our National Forests?
54%	58%	Providing roads, accommodations, and services to help local tourism business in managing our National Forests?

The following questions received a wide diversity of responses. There was a fairly equal distribution of responses and no clear trend towards the 1's or the 5's.

How important is providing access to raw materials and products for local industries and communities in managing our National Forests? (Jefferson was 31-25-38, GW was 28-26-40, a little stronger to the positive)

How important is providing permits to ranchers for grazing of livestock such as cattle and sheep in managing our National Forests? (Jefferson was 26-23-45, GW was 27-24-44, definitely leaning towards the positive)

**Objectives Questions** 

The report also describes **different objectives** that reflect different opinions regarding some specific options (or alternatives) people have risen concerning what we do on the George Washington and Jefferson National Forest. The following is the ranking of

#### Draft of March 2010

questions to those who responded 4 or 5, in other words important to extremely important end of the scale.

George Washington NF Positive %	Jefferson NF Positive %	How important is it to you that theNational Forest
89%	95%	Protect areas that are the sources of water, such as streams, lakes, and watershed areas?
87%	92%	Protect areas that are important wildlife habitats?
80%	86%	Manage the Forest to provide habitat for wildlife and birds for people to see and photograph?
83%	85%	Protect old growth forest areas and allow natural processes to continue into the future?
70%	78%	Create open areas in the National Forest for certain wildlife species?
65%	74%	Use controlled fires on National Forest lands to reduce the threat of wildfires or to improve wildlife habitat conditions?
72%	71%	Develop and maintain trail systems that cross both public and private land for non-motorized recreation such as hiking or horseback riding?
68%	70%	Increase law enforcement?
64%	67%	Designate more areas as wilderness where only primitive and non-motorized uses are allowed?
59%	67%	Allow a diversity of uses such as grazing, recreation, and wildlife habitat?
57%	66%	Increase the total number of acres in the National Forest?
65%	66%	Restrict mining, oil drilling, and other mineral removals?
70%	65%	Allow different groups such as Native Americans to continue their cultural uses of forests such as firewood gathering, herb/berry/plant gathering, and ceremonial access?
61%	65%	Make management decisions concerning the use of the forest at the local level rather than at the national level?
57%	60%	Allow management activities near streams when they do not harm water quality?
55%	58%	Allow a recreation fee that goes back into National Forest management?
54%	52%	Manage the forest to increase populations of wildlife for hunting?
51%	47%	Limit the number of people who can visit a wilderness area to avoid crowding? (even though this was less than 50%, there was a clear trend to the positive – Jefferson has 10-20-47, GW has 20-25-51)
50%	46%	Limit the number of people that can use a river at one time to avoid crowding? (even though this was less than 50%, there was a clear trend to the positive – Jefferson has 22-26-46)

George Washington NF Positive %	Jefferson NF Positive %	How important is it to you that theNational Forest
37%	42%	Allow trading of public lands for private lands, for example, to eliminate private holdings within National Forest boundaries, or to acquire unique natural areas? (even though this was less than 50%, there was a clear trend to the positive – Jefferson has 21-29-42, GW has 24-32-37)

The following is the ranking of questions to those who responded 1 or 2, in other words the "Not Important" to "Not at All Important" end of the scale.

George Washington NF Negative %	Jefferson NF Negative %	How important is it to you that theNational Forest
52%	51%	Expand access for motorized off-highway vehicles on forests, such as 4-wheel drive vehicles?
51%	55%	Allow commercial leasing of oil and gas rights on the National Forest?
48%	48%	Allow recreational gold prospecting and dredging in streams on the National Forest lands?

The following questions received a wide diversity of responses. There was a fairly equal distribution of responses and no clear trend towards the 1's or the 5's. How important is it to you that the National Forest, develop new paved roads for access for cars and recreational vehicles? (Jefferson has 41-26-31; GW has 43-25-27, a little stronger to the negative)

How important is it to you that the National Forest, allow harvesting and mining to help support communities dependant on grazing, minerals or timber? (Jefferson has 33-27-36; GW has 30-28-37, a little stronger to the positive)

How important is it to you that the National Forest, expand commercial recreation services and development for example, resort lodges, guides services, or outfitters? (Jefferson has 33-28-37; GW has 32-31-36, a little stronger to the positive) Environmental Questions

Finally, the report asked how concerned people are with environmental issues. The following is the ranking of questions to those who responded 1 or 2, in other words somewhat to strongly agree.

George Washington NF Negative %	Jefferson NF Negative %	How important is it to you that theNational Forest
91%	94%	Land that provides critical homes for plant and animal species should be protected.

71%	75%	The Endangered Species Act has not gone far enough and should be strengthened.
44%	51%	It is more important to protect streams for trout and other recreational fishing than for other fish species or aquatic life. (GW was 44-15-36)
76%	75%	There should be more controls on tourism and second home development.

The following is the ranking of questions to those who responded 4 or 5, in other words somewhat to strongly disagree.

George Washington NF Negative %	Jefferson NF Negative %	How important is it to you that theNational Forest
63%	67%	There should be more timber production, mining, and other commercial uses of forests to boost the economy.

#### D. Findings and Need for Change

## A. How existing GW Revised Plan Contribute to a County's' Social and Economic Sustainability?

- 1. Practically every county plan emphasizes enhancement of tourism, either through promotion of available recreational activities or visitation to preserved historical sites. Counties typically wish to extend greenways and bike/buggy/hiking trails to reach trails on the National Forest. The GW Forest contributes to this endeavor greatly through its dispersed and developed recreation program.
- 2. Related to National Forest management, almost every county wants to enhance, retain or preserve their rural character by generally protecting their county's scenic resources and sensitive areas. A sensitive area is generally an historic property or unique resources such as river or major road corridor. Bath, Nelson, Rockingham, and Warren have roads they may pursue for Scenic Byway designations. The GW Forest obviously contributes to the rural character of all counties.. For example; Warren County has a goal to "utilize **public lands** as a resource in maintaining the County's rural character."
- 3. Counties wish to protect and preserve their natural resources. Water quality and associated floodplain and wetland management seem to be utmost on the minds of all counties. These are dealt with through zoning regulations and soil erosion and sediment control measures. The GW Forest contributes greatly to high water quality since public lands are generally the sources of high quality stream water. The GW Forest has strict guidelines for management activities with the potential to affect water quality.

#### B. Need for Change

**Emerging Issue - Wind Energy Development** 

- 3. Do the county evaluations indicate a Need for Change to the GW Plan? In essence, are there areas of opportunities for the agency to contribute to achievement of each county's vision, goals and objectives that are not covered by the existing GW Plan?
- a. Is a Change in the Plan warranted? (Yes or No) Yes
- b. Why? Ridgeline development associated with wind energy development is not discussed in the Forest Plan. There are no guidelines associated with wind energy development in the Forest Plan that would provide guidance for project decisionmaking.

See additional discussion at the beginning of this Report.

Emerging Issue - Groundwater and Karst Topography

- 3. Do the county evaluations indicate a Need for Change to the GW Plan? In essence, are there areas of opportunities for the agency to contribute to achievement of each county's vision, goals and objectives that are not covered by the existing GW Plan?
- a. Is a Change in the Plan warranted? (Yes or No) Not Sure, possibly
- b. Why? Limestone geology is known for its karst features. Pluralities of counties are concerned about groundwater, particularly in karst topography. Counties are attempting to avoid, regulate, or discourage development within areas characterized by karst topography so as to minimize groundwater pollution, thereby protecting long term groundwater quality.

See additional discussion at the beginning of this Report.

# APPENDIX C. REVIEW OF LANDS NOT SUITED FOR TIMBER PRODUCTION

#### APPENDIX D. RIPARIAN LITERATURE CITATIONS

Archey, W. 2000. A State Perspective, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Benda, L., D. Miller, J. Sias, D. Martin, R. Bilby, C. Veldhuisen, T. Dunne. 2003. Wood recruitment processes and wood budgeting. Pages 49 – 74 in S. V. Gregory, K. L. Boyer, and A. M. Gurnell, editors. The ecology and management of wood in world rivers. American Fisheries Society, Symposium 37, Bethesda, Maryland.

Crow, T., M. Baker, and B. Barnes. 2000. Diversity in Riparian Landscapes, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

CWRP (Chargin Watershed River Partners, Inc.) and S. Schwartz. 2006. Riparian Setbacks: Technical Information for Decision Makers. Research support of

Darci Houser, under award NAO3NOS4190052 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce through the Ohio Department of Natural Resources, Office of Coastal Management. Original document 1997, revised 2006.

DeGraaf, R., and M. Yamasaki. 2000. Bird and Mammal Habitat in Riparian Areas, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Dolloff, C. A., D. G. Hankin, and G. H. Reeves. 1993. Basinwide estimation of habitat and fish populations in streams. General Technical Report SE-83. Asheville, North Carolina: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experimental Station.

Dolloff, C. A., and J. Webster. 2000. Particulate Organic Contributions from Forests and Streams: Debris Isn't So Bad, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Dolloff, C. A. and M. L. Warren, Jr. 2003. Fish relationships with large wood in small streams. Pages 179-193 in S. V. Gregory, K. L. Boyer, and A. M. Gurnell, editors. The ecology and management of wood in world rivers. American Fisheries Society, Symposium 37, Bethesda, Maryland.

Duncan, S. 2003. Arise Amphibians: Stream buffers affect more than fish. Pacific Northwest Research Station, Science Findings. Issue 53, May 2003.

Gibson, R., R. Haedrich, and C. M. Wernerheim. 2000. Loss of Fish Habitat as a Consequence of Inappropriately Constructed Stream Crossings. Fisheries. Vol. 30, No. 1.

Hankin, D. G., and G. H. Reeves. 1988. Estimating total fish abundance and total habitat area in small streams based on visual estimation methods. Canadian Journal of Fisheries and Aquatic Sciences 45:834-844.

Hilderbrand, R. H., A. D. Lemly, C. A. Dolloff, and K. L. Harpster. 1998. Design considerations for large woody debris placement in stream enhancement projects. North American Journal of Fisheries Management 18:161-167.

Hornbeck, J., and J. Kochenderfer. 2000. Linkages Between Forests and Streams: A Perspective in Time, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Kappesser, G. 1999. The Importance Of Large Woody Debris Recruitment To Intermittent Stream Channels For Watershed Dynamic Equilibrium. US Forest Service White Paper, August 4.

Illhart, B., E. Verry, and B. Palik. 2000. Defining Riparian Areas, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Montgomery, D. R., B. D. Collins, J. M. Buffington, T. B. Abbe. 2003. Geomorphic effects of wood in rivers. Pages 21 – 48 in S. V. Gregory, K. L. Boyer, and A. M. Gurnell, editors. The ecology and management of wood in world rivers. American Fisheries Society, Symposium 37, Bethesda, Maryland.

Palik, B., J. Zasada, and C. Hedman. 2000. Ecological Principles for Riparian Silviculture, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Parrott, H., C. Edwards, and D. Higgins. 2000. Classifying Aquatic Ecosystems and Mapping Riparian Areas, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Pauley, T., J. Mitchell, R. Buech, and J. Moriarty. 2000. Ecology and Management of Riparian Habitats for Amphibians and Reptiles, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Richards, C. and B. Hollingsworth. 2000. Managing Riparian Areas for Fish, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Verry, E. 2000. Water flow in Soils and Streams: Sustaining Hydrologic Function, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.

Welsch, D., J. Hornbeck, E. Verry, C. A. Dolloff, and J. Greis. 2000. Riparian Area Management: Themes and Recommendations, in <u>Riparian Management in Forests of the Continental Eastern United States</u>, edited by E. S. Verry, J. W. Hornbeck, and C.A. Dolloff. Lewis Publishers, CRC Press LLC, Washington D.C.